

Regulatory Authority for Requiring a Compliance-Focused EMS

Draft 8/5/98

| Compliance-focused EMS Element | RCRA (Gen and TSD) | CWA (NPDES BMP) | CAA (RMP) | EPCRA (TRI Reporting) |
|---|--|--|---|--|
| 1. Management policies and procedures (a) corporate env. Policy (b) site-specific env policies and stds | 270.30(e) ¹ | 125.104(b) (4)(iii)(A) 125.104(b) (4)(iii)(F) | 68.155(a) 68.52 | |
| 2. Organization, personnel, and Oversight of EMS | 264.16(a)(2) 264.16(d) | See 125.104 (b)(4)(ii) | 68.15(c) | |
| 3. Accountability and Responsibility | Implicit 264.16(d) | 125.104(b) (4)(iii)(B) | Implicit 68.15(b) &(c) | |
| 4. Environmental requirements | Implicit 262.10(c) 264.1 | Implicit 125.102 | 68.48 68.50(b) 68.180(c) | |
| 5. Assessment, prevention, and Control | 264.13(b) 264.15(a) 264.19 264.31 264.51 | 122.21(g) (2)&(3) 125.102 125.103(d) 125.104(b) (4)(iii)(G) &(H) | 112(r)(7) (A) 68.50 68.52 68.56 68.65 68.67 68.69 68.75 68.170 (e) (3), (4),(5) | 372.10(a)(3) (iv) and (vii) 372.30(b)(3) |

¹ Equivalent of a “regulation-mandated policy” rather than a requirement that the company develop an environmental policy.

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| 6. Environmental incident and Non-compliance inves. | | 125.103(b) (4) & (6) | 68.50(c) 68.60 68.81 68.170(j) | |
| 7. Environmental training, Awareness, and competence | 262.34(d) (5)(iii) 264.16 | 125.104(b) (4)(iii)(E) | 112(r)(7) (A) 68.54 68.56(b) 68.71 68.170(g) | |
| 8. Planning for env. Matters | 264.31 264.51 | 125.102 125.103(d) | 112(r)(7) (A) | |
| 9. Maintenance of records and Documentation | 264.16(d) and (e) 264.73 | 122.21(p) 125.104(b) (4)(iii) (C)& (F) | 112(r)(7) (A) 68.200 | 372.10 372.10(c) |
| 10. Pollution prevention Program | RCRA Sec. 3002(b) 3005(h) 264.19 264.31 264.51 | 125.103(d) | 112(r)(1) 68.170 | |
| 11. Continuing prgm evaluation | | 125.104(e) &(f) | 68.50(d) 68.58 68.190(b) | |
| 12. Public involvement/ Community outreach | | | 68.210 | 370.1 (information) 372.1 |

RCRA

40 CFR 262.10(c)

(c) A generator who treats, stores, or disposes of hazardous waste on-site must only comply with the following sections of this part with respect to that waste: Section 262.11 for determining whether or not he has a hazardous waste, §262.12 for obtaining an EPA identification number, §262.34 for accumulation of hazardous waste, §262.40 (c) and (d) for recordkeeping, §262.43 for additional reporting, and if applicable, §262.70 for farmers.

40 CFR 262.34(d)(5)(iii)

(iii) The generator must ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies;

40 CFR 264.1 Purpose, scope and applicability.

(a) The purpose of this part is to establish minimum national standards which define the acceptable management of hazardous waste.

(b) The standards in this part apply to owners and operators of all facilities which treat, store, or dispose of hazardous waste, except as specifically provided otherwise in this part or part 261 of this chapter.

(c) The requirements of this part apply to a person disposing of hazardous waste by means of ocean disposal subject to a permit issued under the Marine Protection, Research, and Sanctuaries Act only to the extent they are included in a RCRA permit by rule granted to such a person under part 270 of this chapter.

[Comment: These Part 264 regulations do apply to the treatment or storage of hazardous waste before it is loaded onto an ocean vessel for incineration or disposal at sea.]

(d) The requirements of this part apply to a person disposing of hazardous waste by means of underground injection subject to a permit issued under an Underground Injection Control (UIC) program approved or promulgated under the Safe Drinking Water Act only to the extent they are required by §144.14 of this chapter.

[Comment: These Part 264 regulations do apply to the above-ground treatment or storage of hazardous waste before it is injected underground.]

(e) The requirements of this part apply to the owner or operator of a POTW which treats, stores, or disposes of hazardous waste only to the extent they are included in a RCRA permit by rule granted to such a person under part 270 of this chapter.

40 CFR 264.13(c) - Waste Analysis Plan

(c) For off-site facilities, the waste analysis plan required in paragraph (b) of this section must also specify the **procedures** which will be used to inspect and, if necessary, analyze each movement of hazardous waste received at the facility to ensure that it matches the identity of the waste designated on the accompanying manifest or shipping paper. At a minimum, the plan must describe:

(1) The procedures which will be used to determine the identity of each movement of waste

managed at the facility; and

(2) The sampling method which will be used to obtain a representative sample of the waste to be identified, if the identification method includes sampling.

[Comment: Part 270 of this chapter requires that the waste analysis plan be submitted with Part B of the permit application.]

(3) The procedures that the owner or operator of an off-site landfill receiving containerized hazardous waste will use to determine whether a hazardous waste generator or treater has added a biodegradable sorbent to the waste in the container.

40 CFR 264.15 General inspection requirements.

(a) The owner or operator must inspect his facility for malfunctions and deterioration, operator errors, and discharges which may be causing—or may lead to—(1) release of hazardous waste constituents to the environment or (2) a threat to human health. The owner or operator must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

40 CFR 264.16

(a) (1) Facility personnel must successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of this part. The owner or operator must ensure that this program includes all the elements described in the document required under paragraph (d)(3) of this section.

[Comment: Part 270 of this chapter requires that owners and operators submit with Part B of the RCRA permit application, an outline of the training program used (or to be used) at the facility and a brief description of how the training program is designed to meet actual job tasks.]

(2) This program must be directed by a person trained in hazardous waste management procedures, and must include instruction which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed.

(3) At a minimum, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including, where applicable:

- (i) Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;
- (ii) Key parameters for automatic waste feed cut-off systems;
- (iii) Communications or alarm systems;

- (iv) Response to fires or explosions;
- (v) Response to ground-water contamination incidents; and
- (vi) Shutdown of operations.

(b) Facility personnel must successfully complete the program required in paragraph (a) of this section within six months after the effective date of these regulations or six months after the date of their employment or assignment to a facility, or to a new position at a facility, whichever is later. Employees hired after the effective date of these regulations must not work in unsupervised positions until they have completed the training requirements of paragraph (a) of this section.

(c) Facility personnel must take part in an annual review of the initial training required in paragraph (a) of this section.

(d) The owner or operator must maintain the following documents and records at the facility:

(1) The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job;

(2) **A written job description** for each position listed under paragraph (d)(1) of this section. This description may be consistent in its degree of specificity with descriptions for other similar positions in the same company location or bargaining unit, but **must include** the requisite skill, education, or other qualifications, and **duties of employees assigned to each position**;

(3) A written description of the type and amount of both **introductory and continuing training** that will be given to each person filling a position listed under paragraph (d)(1) of this section;

(4) Records that document that the training or job experience required under paragraphs (a), (b), and (c) of this section has been given to, and completed by, facility personnel.

40 CFR 264.16(e)

(e) **Training records** on current personnel must be kept until closure of the facility; training records on former employees must be kept for at least three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.

40 CFR 264.19 Construction quality assurance program.

(a) CQA program.

(1) A construction quality assurance (CQA) program is required for all surface impoundment, waste pile, and landfill units that are required to comply with §§264.221(c) and (d), 264.251(c) and (d), and 264.301(c) and (d). The program must ensure that the constructed unit meets or exceeds all design criteria and specifications in the permit. The program must be developed and implemented under the direction of a CQA officer who is a registered professional engineer.

40 CFR 264.31 Design and operation of facility.

Facilities must be designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

40 CFR 264.51 Purpose and implementation of contingency plan.

40 CFR 264.51(a)

(a) Each owner or operator must have a contingency plan for his facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water.

40 CFR 264.73 Operating record.

(a) The owner or operator must keep a written operating record at his facility.

(b) The following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility:

40 CFR 270.30 Conditions applicable to all [RCRA] permits.

The following conditions apply to all RCRA permits, and shall be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to these regulations (or the corresponding approved State regulations) must be given in the permit.

(e) **Proper operation and maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. **Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures.** This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

RCRA Sec. 3002(b)

"(b) **Waste Minimization.** — Effective September 1, 1985, the manifest required by subsection (a)(5) shall contain a certification by the generator that—

RCRA Sec. 3002(b)(1)

"(1) the generator of the hazardous waste has a program in place to reduce the volume or quantity and toxicity of such waste to the degree determined by the generator to be economically practicable; and

RCRA Sec. 3002(b)(2)

"(2) the proposed method of treatment, storage, or disposal is that practicable method currently available to the generator which minimizes the present and future threat to human health and the environment.

RCRA Sec. 3005(h)

"(h) **Waste Minimization.**—Effective September 1, 1985, it shall be a condition of any permit issued under this section for the treatment, storage, or disposal of hazardous waste on the premises where such waste was generated that the permittee certify, no less often than annually, that—

"(1) the generator of the hazardous waste has a program in place to reduce the volume or quantity and toxicity of such waste to the degree determined by the generator to be economically practicable; and

RCRA Sec. 3005(h)(2)

"(2) the proposed method of treatment, storage, or disposal is that practicable method currently available to the generator which minimizes the present and future threat to human health and the environment.

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CWA

40 CFR 122.21 - NPDES Permit Application Requirements

(g) Application requirements for existing manufacturing, commercial, mining, and silvicultural dischargers. Existing manufacturing, commercial mining, and silvicultural dischargers applying for NPDES permits, except for those facilities subject to the requirements of §122.21(h), shall provide the following information to the Director, using application forms provided by the Director.

(2) Line drawing. A line drawing of the water flow through the facility with a water balance, showing operations contributing wastewater to the effluent and treatment units. Similar processes, operations, or production areas may be indicated as a single unit, labeled to correspond to the more detailed identification under paragraph (g)(3) of this section. The water balance must show approximate average flows at intake and discharge points and between units, including treatment units. If a water balance cannot be determined (for example, for certain mining activities), the applicant may provide instead a pictorial description of the nature and amount of any sources of water and any collection and treatment measures.

(3) Average flows and treatment. A narrative identification of each type of process, operation, or production area which contributes wastewater to the effluent for each outfall, including process wastewater, cooling water, and stormwater runoff; the average flow which each process contributes; and a description of the treatment the wastewater receives, including the ultimate disposal of any solid or fluid wastes other than by discharge. Processes, operations, or production areas may be described in general terms (for example, "dye-making reactor", "distillation tower"). For a privately owned treatment works, this information shall include the identity of each user of the treatment works. The average flow of point sources composed of storm water may be estimated. The basis for the rainfall event and the method of estimation must be indicated.

(p) **Recordkeeping.** Except for information required by paragraph (d)(3)(ii) of this section, which shall be retained for a period of at least five years from the date the application is signed (or longer as required by 40 CFR part 503), applicants shall keep records of all data used to complete permit applications and any supplemental information submitted under this section for a period of at least 3 years from the date the application is signed.

40 CFR 125.102 Applicability of best management practices.

Dischargers who use, manufacture, store, handle or discharge any pollutant listed as toxic under section 307(a)(1) of the Act or any pollutant listed as hazardous under section 311 of the Act are subject to the requirements of this Subpart for all activities which may result in significant amounts of those pollutants reaching waters of the United States. **These activities are ancillary manufacturing operations including: Materials storage areas; in-plant transfer, process and material handling areas; loading and unloading operations; plant site runoff; and sludge and waste disposal areas.**

40 CFR 125.103(b)

(b) Best management practices may be expressly incorporated into a permit on a case-by-case basis where determined necessary to carry out the provisions of the Act under section 402(a)(1). In issuing a permit containing BMP requirements, the Director shall consider the following factors:

- (1) Toxicity of the pollutant(s);
- (2) Quantity of the pollutant(s) used, produced, or discharged;
- (3) History of NPDES permit violations;
- (4) History of significant leaks or spills of toxic or hazardous pollutants;**
- (5) Potential for adverse impact on public health (e.g., proximity to a public water supply) or the environment (e.g., proximity to a sport or commercial fishery); and
- (6) Any other factors determined to be relevant to the control of toxic or hazardous pollutants.**

40 CFR 125.103(d)

(d) In addition to the requirements of paragraphs (a) and (b) of this section, dischargers covered under §125.102 shall develop and implement a best management practices program in accordance with §125.104 which **prevents, or minimizes the potential** for, the release of toxic or hazardous pollutants from ancillary activities to waters of the United States

40 CFR 125.104(b)(4)

(4) The BMP program:

(i) May reflect requirements for Spill Prevention Control and Countermeasure (SPCC) plans under section 311 of the Act and 40 CFR part 151, and may incorporate any part of such plans into the BMP program by reference;

(ii) Shall assure the proper management of solid and hazardous waste in accordance with regulations promulgated under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (RCRA) (40 U.S.C. 6901 et seq). **Management practices required under RCRA regulations shall be expressly incorporated into the BMP program; and**

(iii) Shall address the following points for the ancillary activities in §125.102:

- (A) Statement of policy;**
- (B) Spill Control Committee;**
- (C) Material inventory;**
- (D) Material compatibility;
- (E) Employee training;**
- (F) Reporting and notification procedures;**
- (G) Visual inspections;**
- (H) Preventive maintenance;**
- (I) Housekeeping; and

40 CFR 125.104(e) & (f)

(e) The owner or operator of a facility subject to this subpart shall **amend the BMP** program in accordance with the provisions of this subpart **whenever there is a change** in facility design, construction, operation, or maintenance which materially affects the facility's potential for discharge of significant amounts of hazardous or toxic pollutants into the waters of the United States.

(f) **If the BMP program proves to be ineffective** in achieving the general objective of preventing the release of significant amounts of toxic or hazardous pollutants to those waters and the specific objectives and requirements under paragraph (b) of this section, **the permit and/or the BMP program shall be subject to modification** to incorporate revised BMP requirements.

[Editor's note: The authority for §125.104 is Clean Water Act, Safe Drinking Water Act, Clean Air Act, Resource Conservation and Recovery Act: 42 U.S.C. 6905, 6912, 6925, 6027, 6974]

[§125.104 amended at 45 FR 33512, May 19, 1980; 48 FR 14293, April 1, 1983]

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CAA

CAA Sec. 112(r)(7)(A) (Intent of regulations)

(A) In order to **prevent accidental releases** of regulated substances, the Administrator is authorized to **promulgate release prevention, detection, and correction requirements which may include monitoring, record-keeping, reporting, training, vapor recovery, secondary containment, and other design, equipment, work practice, and operational requirements.**

Regulations promulgated under this paragraph may make distinctions between various types, classes, and kinds of facilities, devices and systems taking into consideration factors including, but not limited to, the size, location, process, process controls, quantity of substances handled, potency of substances, and response capabilities present at any stationary source. Regulations promulgated pursuant to this subparagraph shall have an effective date, as determined by the Administrator, assuring compliance as expeditiously as practicable.

PART 68—CHEMICAL ACCIDENT PREVENTION PROVISIONS

40 CFR 68.12(c)

(c) Program 2 requirements. In addition to meeting the requirements of paragraph (a) of this section, the owner or operator of a stationary source with a process subject to Program 2, as provided in §68.10(c), shall:

40 CFR 68.12(c)(1)

(1) Develop and implement a management system as provided in §68.15;

40 CFR 68.12(c)(2)

(2) Conduct a hazard assessment as provided in §§68.20 through 68.42;

40 CFR 68.15 Management.

[§68.15 added at 61 FR 31718, June 20, 1996]

(a) The owner or operator of a stationary source with processes subject to Program 2 or Program 3 **shall develop a management system to oversee the implementation of the risk management program elements.**

(b) The owner or operator shall assign a qualified person or position that has the **overall responsibility** for the development, implementation, and integration of the risk management program elements.

(c) When responsibility for implementing individual requirements of this part is assigned to persons other than the person identified under paragraph (b) of this section, the names or positions of these people shall be documented and **the lines of authority defined through an organization chart or similar document.**

40 CFR 68.48 Safety information.

(a) The owner or operator shall compile and maintain the following up-to-date safety information

related to the regulated substances, processes, and equipment:

- (1) Material Safety Data Sheets that meet the requirements of 29 CFR 1910.1200(g);
- (2) Maximum intended inventory of equipment in which the regulated substances are stored or processed;
- (3) Safe upper and lower temperatures, pressures, flows, and compositions;
- (4) Equipment specifications; and
- (5) Codes and standards used to design, build, and operate the process.

(b) The owner or operator shall ensure that the process is designed in compliance with recognized and generally accepted good engineering practices. Compliance with Federal or state regulations that address industry-specific safe design or with industry-specific design codes and standards may be used to demonstrate compliance with this paragraph.

(c) The owner or operator shall update the safety information if a major change occurs that makes the information inaccurate.

40 CFR 68.50 Hazard review.

40 CFR 68.50(a)

(a) The owner or operator shall conduct a review of the hazards associated with the regulated substances, process, and procedures. The review shall identify the following:

- (1) The hazards associated with the process and regulated substances;
- (2) Opportunities for equipment malfunctions or human errors that could cause an accidental release;
- (3) The safeguards used or needed to control the hazards or prevent equipment malfunction or human error; and
- (4) Any steps used or needed to detect or monitor releases.

(b) The owner or operator may use checklists developed by persons or organizations knowledgeable about the process and equipment as a guide to conducting the review. For processes designed to meet industry standards or Federal or state design rules, the hazard review shall, by inspecting all equipment, determine whether the process is designed, fabricated, and operated in accordance with the applicable standards or rules.

(c) The owner or operator shall document the results of the review and ensure that problems identified are resolved in a timely manner.

(d) The review shall be updated at least once every five years. The owner or operator shall also conduct reviews whenever a major change in the process occurs; all issues identified in the review shall be resolved before startup of the changed process.

40 CFR 68.52 Operating procedures.

40 CFR(b) The procedures shall address the following:

- (1) Initial startup;

- (2) Normal operations;
- (3) Temporary operations;
- (4) Emergency shutdown and operations;
- (5) Normal shutdown;

(6) Startup following a normal or emergency shutdown or a major change that requires a hazard review;

(7) Consequences of deviations and steps required to correct or avoid deviations; and

(8) Equipment inspections.

(c) The owner or operator shall ensure that the operating procedures are updated, if necessary, whenever a major change occurs and prior to startup of the changed process.

40 CFR 68.54 Training.

(a) The owner or operator shall ensure that each employee presently operating a process, and each employee newly assigned to a covered process have been trained or tested competent in the operating procedures provided in §68.52 that pertain to their duties. For those employees already operating a process on June 21, 1999, the owner or operator may certify in writing that the employee has the required knowledge, skills, and abilities to safely carry out the duties and responsibilities as provided in the operating procedures.

(b) Refresher training. Refresher training shall be provided at least every three years, and more often if necessary, to each employee operating a process to ensure that the employee understands and adheres to the current operating procedures of the process. The owner or operator, in consultation with the employees operating the process, shall determine the appropriate frequency of refresher training.

(c) The owner or operator may use training conducted under Federal or state regulations or under industry-specific standards or codes or training conducted by covered process equipment vendors to demonstrate compliance with this section to the extent that the training meets the requirements of this section.

(d) The owner or operator shall ensure that operators are trained in any updated or new procedures prior to startup of a process after a major change.

40 CFR 68.56 Maintenance.

(a) The owner or operator shall prepare and implement procedures to maintain the on-going mechanical integrity of the process equipment. The owner or operator may use procedures or instructions provided by covered process equipment vendors or procedures in Federal or state regulations or industry codes as the basis for stationary source maintenance procedures.

(b) The owner or operator shall train or cause to be trained each employee involved in maintaining the on-going mechanical integrity of the process. To ensure that the employee can perform the job tasks in a safe manner, each such employee shall be trained in the hazards of the process, in how to avoid or correct unsafe conditions, and in the procedures applicable to the employee's job tasks.

(c) Any maintenance contractor shall ensure that each contract maintenance employee is trained to perform the maintenance procedures developed under paragraph (a) of this section.

(d) The owner or operator shall perform or cause to be performed inspections and tests on process equipment. Inspection and testing procedures shall follow recognized and generally accepted good engineering practices. The frequency of inspections and tests of process equipment shall be consistent with applicable manufacturers' recommendations, industry standards or codes, good engineering practices, and prior operating experience.

40 CFR 68.58 Compliance audits.

(a) The owner or operator shall certify that they have evaluated compliance with the provisions of this subpart at least every three years to verify that the procedures and practices developed under the rule are adequate and are being followed.

(b) The compliance audit shall be conducted by at least one person knowledgeable in the process.

(c) The owner or operator shall develop a report of the audit findings.

(d) The owner or operator shall promptly determine and document an appropriate response to each of the findings of the compliance audit and document that deficiencies have been corrected.

(e) The owner or operator shall retain the two (2) most recent compliance audit reports. This requirement does not apply to any compliance au(a)

(a) The owner or operator shall prepare written operating procedures that provide clear instructions or steps for safely conducting activities associated with each covered process consistent with the safety information for that process. Operating procedures or instructions provided by equipment manufacturers or developed by persons or organizations knowledgeable about the process and equipment may be used as a basis for a stationary source's operating procedures.

(b) The procedures shall address the following:

(1) Initial startup;

(2) Normal operations;

(3) Temporary operations;

(4) Emergency shutdown and operations;

(5) Normal shutdown;

(6) Startup following a normal or emergency shutdown or a major change that requires a hazard review;

(7) Consequences of deviations and steps required to correct or avoid deviations; and

(8) Equipment inspections.

(c) The owner or operator shall ensure that the operating procedures are updated, if necessary, whenever a major change occurs and prior to startup of the changed process.

40 CFR 68.60 Incident investigation.

(a) The owner or operator shall investigate each incident which resulted in, or could reasonably have resulted in a catastrophic release.

(b) An incident investigation shall be initiated as promptly as possible, but not later than 48 hours

following the incident.

(c) A summary shall be prepared at the conclusion of the investigation which includes at a minimum:

- (1) Date of incident;
- (2) Date investigation began;
- (3) A description of the incident;
- (4) The factors that contributed to the incident; and,
- (5) Any recommendations resulting from the investigation.

(d) The owner or operator shall promptly address and resolve the investigation findings and recommendations. Resolutions and corrective actions shall be documented.

(e) The findings shall be reviewed with all affected personnel whose job tasks are affected by the findings.

(f) Investigation summaries shall be retained for five years.

Subpart D—Program 3 Prevention Program

[Subpart D added at 61 FR 31722, June 20, 1996]

40 CFR 68.65 Process safety information.

(a) In accordance with the schedule set forth in §68.67, the owner or operator shall complete a compilation of written process safety information before conducting any process hazard analysis required by the rule. The compilation of written process safety information is to enable the owner or operator and the employees involved in operating the process to identify and understand the hazards posed by those processes involving regulated substances. This process safety information shall include information pertaining to the hazards of the regulated substances used or produced by the process, information pertaining to the technology of the process, and information pertaining to the equipment in the process.

(b) Information pertaining to the hazards of the regulated substances in the process. This information shall consist of at least the following:

- (1) Toxicity information;
- (2) Permissible exposure limits;
- (3) Physical data;
- (4) Reactivity data;
- (5) Corrosivity data;
- (6) Thermal and chemical stability data; and
- (7) Hazardous effects of inadvertent mixing of different materials that could foreseeably occur.

Note to paragraph (b): Material Safety Data Sheets meeting the requirements of 29 CFR 1910.1200(g) may be used to comply with this requirement to the extent they contain the information required by this subparagraph.

(c) Information pertaining to the technology of the process.

- (1) Information concerning the technology of the process shall include at least the following:
 - (i) A block flow diagram or simplified process flow diagram;

(ii) Process chemistry;
(iii) Maximum intended inventory;
(iv) Safe upper and lower limits for such items as temperatures, pressures, flows or compositions; and,
(v) An evaluation of the consequences of deviations.
;
shall document that equipment complies with recognized and generally accepted good engineering practices.

(3) For existing equipment designed and constructed in accordance with codes, standards, or practices that are no longer in general use, the owner or operator shall determine and document that the equipment is designed, maintained, inspected, tested, and operating in a safe manner.

40 CFR 68.67 Process hazard analysis.

(a) The owner or operator shall perform an initial process hazard analysis (hazard evaluation) on processes covered by this part. The process hazard analysis shall be appropriate to the complexity of the process and shall identify, evaluate, and control the hazards involved in the process. The owner or operator shall determine and document the priority order for conducting process hazard analyses based on a rationale which includes such considerations as extent of the process hazards, number of potentially affected employees, age of the process, and operating history of the process. The process hazard analysis shall be conducted as soon as possible, but not later than June 21, 1999. Process hazards analyses completed to comply with 29 CFR 1910.119(e) are acceptable as initial process hazards analyses. These process hazard analyses shall be updated and revalidated, based on their completion date.

(e) The owner or operator shall establish a system to promptly address the team's findings and recommendations; assure that the recommendations are resolved in a timely manner and that the resolution is documented; document what actions are to be taken; complete actions as soon as possible; develop a written schedule of when these actions are to be completed; communicate the actions to operating, maintenance and other employees whose work assignments are in the process and who may be affected by the recommendations or actions.

(f) At least every five (5) years after the completion of the initial process hazard analysis, the process hazard analysis shall be updated and revalidated by a team meeting the requirements in paragraph (d) of this section, to assure that the process hazard analysis is consistent with the current process. Updated and revalidated process hazard analyses completed to comply with 29 CFR 1910.119(e) are acceptable to meet the requirements of this paragraph.

(g) The owner or operator shall retain process hazards analyses and updates or revalidations for each process covered by this section, as well as the documented resolution of recommendations described in paragraph (e) of this section for the life of the process.

40 CFR 68.69 Operating procedures.

(a) The owner or operator shall develop and implement written operating procedures that provide clear instructions for safely conducting activities involved in each covered process consistent with the process safety information and shall address at least the following elements.

- (1) Steps for each operating phase:
- (2) Operating limits:
- (3) Safety and health considerations:
- (4) Safety systems and their functions.

(b) Operating procedures shall be readily accessible to employees who work in or maintain a process.

(c) The operating procedures shall be reviewed as often as necessary to assure that they reflect current operating practice, including changes that result from changes in process chemicals, technology, and equipment, and changes to stationary sources. The owner or operator shall certify annually that these operating procedures are current and accurate.

(d) The owner or operator shall develop and implement safe work practices to provide for the control of hazards during operations such as lockout/tagout; confined space entry; opening process equipment or piping; and control over entrance into a stationary source by maintenance, contractor, laboratory, or other support personnel. These safe work practices shall apply to employees and contractor employees.

40 CFR 68.71 Training.

(a) Initial training.

(1) Each employee presently involved in operating a process, and each employee before being involved in operating a newly assigned process, shall be trained in an overview of the process and in the operating procedures as specified in §68.69. The training shall include emphasis on the specific safety and health hazards, emergency operations including shutdown, and safe work practices applicable to the employee's job tasks.

(2) In lieu of initial training for those employees already involved in operating a process on June 21, 1999 an owner or operator may certify in writing that the employee has the required knowledge, skills, and abilities to safely carry out the duties and responsibilities as specified in the operating procedures.

(b) Refresher training. Refresher training shall be provided at least every three years, and more often if necessary, to each employee involved in operating a process to assure that the employee understands and adheres to the current operating procedures of the process. The owner or operator, in consultation with the employees involved in operating the process, shall determine the appropriate frequency of refresher training.

(c) Training documentation. The owner or operator shall ascertain that each employee involved in operating a process has received and understood the training required by this paragraph. The owner or operator shall prepare a record which contains the identity of the employee, the date of training, and the means used to verify that the employee understood the training.

40 CFR 68.75 Management of change.

(a) The owner or operator shall establish and implement written procedures to manage changes (except for "replacements in kind") to process chemicals, technology, equipment, and procedures; and, changes to stationary sources that affect a covered process.

(b) The procedures shall assure that the following considerations are addressed prior to any change:

- (1) The technical basis for the proposed change;
- (2) Impact of change on safety and health;
- (3) Modifications to operating procedures;
- (4) Necessary time period for the change; and,
- (5) Authorization requirements for the proposed change.

(c) Employees involved in operating a process and maintenance and contract employees whose job tasks will be affected by a change in the process shall be informed of, and trained in, the change prior to start-up of the process or affected part of the process.

(d) If a change covered by this paragraph results in a change in the process safety information required by §68.65 of this part, such information shall be updated accordingly.

(e) If a change covered by this paragraph results in a change in the operating procedures or practices required by §68.69, such procedures or practices shall be updated accordingly.

40 CFR 68.79 Compliance audits.

(a) The owner or operator shall certify that they have evaluated compliance with the provisions of this section at least every three years to verify that the procedures and practices developed under the standard are adequate and are being followed.

(b) The compliance audit shall be conducted by at least one person knowledgeable in the process.

(c) A report of the findings of the audit shall be developed.

(d) The owner or operator shall promptly determine and document an appropriate response to each of the findings of the compliance audit, and document that deficiencies have been corrected.

(e) The owner or operator shall retain the two (2) most recent compliance audit reports.

40 CFR 68.81 Incident investigation.

(a) The owner or operator shall investigate each incident which resulted in, or could reasonably have resulted in a catastrophic release of a regulated substance.

(b) An incident investigation shall be initiated as promptly as possible, but not later than 48 hours following the incident.

(c) An incident investigation team shall be established and consist of at least one person knowledgeable in the process involved, including a contract employee if the incident involved work of the contractor, and other persons with appropriate knowledge and experience to thoroughly investigate and analyze the incident.

(d) A report shall be prepared at the conclusion of the investigation which includes at a minimum:

- (1) Date of incident;
- (2) Date investigation began;
- (3) A description of the incident;
- (4) The factors that contributed to the incident; and,

- (5) Any recommendations resulting from the investigation.
- (e) The owner or operator shall establish a system to promptly address and resolve the incident report findings and recommendations. Resolutions and corrective actions shall be documented.
- (f) The report shall be reviewed with all affected personnel whose job tasks are relevant to the incident findings including contract employees where applicable.
- (g) Incident investigation reports shall be retained for five years.

Subpart G—Risk Management Plan

40 CFR 68.155 Executive summary.

The owner or operator shall provide in the RMP an executive summary that includes a brief description of the following elements:

40 CFR 68.155(a)

- (a) The accidental release prevention and emergency response **policies** at the stationary source

40 CFR 68.170 Prevention program/Program 2.

(a) For each Program 2 process, the owner or operator shall provide in the RMP the information indicated in paragraphs (b) through (k) of this section. If the same information applies to more than one covered process, the owner or operator may provide the information only once, but shall indicate to which processes the information applies.

40 CFR 68.170(b)

- (e) The date of completion of the most recent hazard review or update.
 - (1) The expected date of completion of any changes resulting from the hazard review;
 - (2) Major hazards identified;
 - (3) **Process controls in use;**
 - (4) **Mitigation systems in use;**
 - (5) **Monitoring and detection systems in use;** and
 - (6) Changes since the last hazard review.
- (f) The date of the most recent review or revision of operating procedures.

40 CFR 68.170(g)

- (g) The date of the most recent review or revision of **training programs** ;
 - (1) The **type of training** provided—classroom, classroom plus on the job, on the job; and
 - (2) The type of **competency testing** used.

(h) The date of the most recent review or revision of maintenance procedures and the date of the most recent equipment inspection or test and the equipment inspected or tested.

40 CFR 68.170(i)

(i) The date of the most recent compliance audit and the expected date of completion of any changes resulting from the compliance audit.

40 CFR 68.170(j)

(j) The date of the most recent incident investigation and the expected date of completion of any changes resulting from the investigation.

40 CFR 68.170(k)

(k) The date of the most recent change that triggered a review or revision of safety information, the hazard review, operating or maintenance procedures, or training.

40 CFR 68.180 Emergency response program.

(c) The owner or operator shall list other Federal or state emergency plan requirements to which the stationary source is subject.

40 CFR 68.200 Recordkeeping.

The owner or operator shall maintain records supporting the implementation of this part for five years unless otherwise provided in Subpart D of this part.

40 CFR 68.210 Availability of information to the public.

(a) The RMP required under subpart G of this part shall be available to the public under 42 U.S.C. 7414(c).

(b) The disclosure of classified information by the Department of Defense or other Federal agencies or contractors of such agencies shall be controlled by applicable laws, regulations, or executive orders concerning the release of classified information.

EPCRA

40 CFR 370.1 Purpose.

These regulations establish reporting requirements which provide the public with important information on the hazardous chemicals in their communities for the purpose of enhancing community awareness of chemical hazards and facilitating development of State and local emergency response plans.

40 CFR 372.1 Scope and purpose.

This part sets forth requirements for the submission of information relating to the release of toxic chemicals under section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986. The information collected under this part is intended to inform the general public and the communities surrounding covered facilities about releases of toxic chemicals, to assist research, to aid in the development of regulations, guidelines, and standards, and for other purposes. This part also sets forth requirements for suppliers to notify persons to whom they distribute mixtures or trade name products containing toxic chemicals that they contain such chemicals.

40 CFR 372.10 Recordkeeping.

(a) Each person subject to the reporting requirements of this part must retain the following records for a period of 3 years from the date of the submission of a report under §372.30:

- (1) A copy of each report submitted by the person under §372.30.
- (2) All supporting materials and documentation used by the person to make the compliance determination that the facility or establishments is a covered facility under §372.22 or §372.45.
- (3) Documentation supporting the report submitted under §372.30 including:
 - (i) Documentation supporting any determination that a claimed allowable exemption under §372.38 applies.
 - (ii) Data supporting the determination of whether a threshold under §372.25 applies for each toxic chemical released to the environment or transferred to an off-site location.
 - (iii) Documentation supporting the calculations of the quantity of each toxic chemical released to the environment or transferred to an off-site location.
 - (iv) Documentation supporting the use indications and quantity on site reporting for each toxic chemical.

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- (v) Documentation supporting the basis of estimate used in developing any release or
- (vi) Receipts or manifests associated with the transfer of each toxic chemical in waste to off-site location s.
- (vii) Documentation supporting reported waste treatment methods, estimates of treatment efficiencies, ranges of influent concentration to such treatment, the sequential nature of treatment steps, if applicable, and the actual operating data, if applicable, to support the waste treatment efficiency estimate for each toxic chemical.
- (b) Each person subject to the notification requirements of this part must retain the following records for a period of 3 years from the date of the submission of a notification under §372.45.
- (1) All supporting materials and documentation used by the person to determine whether a notice is required under §372.45.
- (2) All supporting materials and documentation used in developing each required notice under §372.45 and a copy of each notice.
- (c) Records retained under this section must be maintained at the facility to which the report applies or from which a notification was provided. Such records must be readily available for purposes of inspection by EPA.

40 CFR 372.30 Reporting requirements and schedule for reporting.

[§372.30 amended at 53 FR 12748, April 18, 1988; 56 FR 29185, June 26, 1991]

(a) For each toxic chemical known by the owner or operator to be manufactured (including imported), processed, or otherwise used in excess of an applicable threshold quantity in §372.25 at its covered facility described in §372.22 for a calendar year, the owner or operator must submit to EPA and to the State in which the facility is located a completed EPA Form R (EPA Form 9350-1) in accordance with the instructions referred to in subpart E of this part.

(b) (1) The owner or operator of a covered facility is required to report as described in paragraph (a) of this section on a toxic chemical that the owner or operator knows is present as a component of a mixture or trade name product which the owner or operator receives from another person, if that chemical is imported, processed, or otherwise used by the owner or operator in excess of an applicable threshold quantity in §372.25 at the facility as part of that mixture or trade name product.

(2) The owner or operator knows that a toxic chemical is present as a component of a mixture or trade name product (i) if the owner or operator knows or has been told the chemical identity or Chemical Abstracts Service Registry Number of the chemical and the identity or Number corresponds to an identity or Number in §372.65, or (ii) if the owner or operator has been told by the supplier of the mixture or trade name product that the mixture or trade name product contains a toxic chemical subject to section 313 of the Act or this part.

(3) To determine whether a toxic chemical which is a component of a mixture or trade name product has been imported, processed, or otherwise used in excess of an applicable threshold in §372.25 at the facility, the owner or operator shall consider only the portion of the mixture or trade name product that consists of the toxic chemical and that is imported, processed, or otherwise used at the facility, together with any other amounts of the same toxic chemical that the owner or operator manufactures, imports, processes, or otherwise uses at the facility as follows:

(i) If the owner or operator knows the specific chemical identity of the toxic chemical and the specific concentration at which it is present in the mixture or trade name product, the owner or operator shall determine the weight of the chemical imported, processed, or otherwise used as part of the mixture or trade name product at the facility and shall combine that with the weight of the toxic chemical manufactured (including imported), processed, or otherwise used at the facility other than as part of the mixture or trade name product. After combining these amounts, if the owner or operator determines that the toxic chemical was manufactured, processed, or otherwise used in excess of an applicable threshold in §372.25, the owner or operator shall report the specific chemical identity and all releases of the toxic chemical on EPA Form Rin accordance with the instructions referred to in subpart E of this part.

(further details of procedures for making this analysis follow in the regulations)